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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 08/872,659 | 06/10/1997 | SANDOR NAGY | 016199/1110 | 9801 |

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EXAMINER

RABAGO, ROBERTO

ART UNIT PAPER NUMBER

1713

DATE MAILED: 10/17/2003

28

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/872,659

Applicant(s)

NAGY ET AL.

Examiner

Rob Rábago

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22, 24-28, 30-34, 38-42, 44, 46-48, 50, 51, 53, 55, 58-61, 63, 65-67 and 69-72 is/are allowed.
- 6) ☒ Claim(s) 74-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s) _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Continuation of Disposition of Claims: Claims pending in the application are 22,24-28,30-34,38-42,44,46-48,50,51,53,55,58-61,63,65-67,69-72 and 74-104.

DETAILED ACTION

1. Prior rejection under 35 USC 103(a) over Reichle of claims 22, 24-28, 30-34, 38-42, 44, 46-48, 50, 51, 53, 55, 58-61, 63, 65-67 and 69-72 is withdrawn in view of amendment removing -O- as a species for Y.

Claim Rejections - 35 USC § 112

2. Claims 74-81 and 104 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

(a) In claim 74 (and claims 75-81 by dependency), no disclosure in the specification as filed can be found for the inclusion of C₁₅ and C₁₆ in the definition of R' as "C₆₋₁₆ aryl".

(b) In claim 104, no disclosure in the specification as filed can be found for the three species mentioned in the final clause of the claim.

3. Claim 104 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have established a pattern of defining all claimed elements, yet this claim has failed to define the parameter R. Since this is the only

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parameter which does not contain a definition in the claims, it cannot be determined whether applicants intend for only this one parameter to correspond to one of the definitions provided in the specification, or whether the intended definition for R has been inadvertently omitted.

Claim Rejections - 35 USC § 103

4. Claims 82-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichle et al. (US 5,852,146).

The reference discloses transition metal complexes of bis-pyridinoxy or bis-quinolinoxy ligands in catalyst compositions comprising an aluminoxane or borate-based cocatalyst (col. 1-5) for olefin polymerization (col. 5, line 37 through col. 6, line 61). The genus of organometallic compounds of the instant claims is substantially coextensive with the reference genus of unbridged ligand structures, and one of ordinary skill in the art would be motivated to use the full scope of the unbridged compounds for olefin polymerization as taught in Reichle because patentee has suggested that a useful polymerization process would result, with reasonable success expected.

A comment regarding the examples from Reichle is in order. Absent applicants' parent application (hereinafter Nagy I (US Pat. 5,637,660)), the reference would have been applied under 35 USC 102(e) because the examples show embodiments within the claimed scope. However, as these same embodiments were disclosed in Nagy I, it would appear that applicants have established priority to the species exemplified in

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Reichle. The filing date of Reichle predates that of the instant CIP application (hereinafter Nagy II), and that of Nagy I predates Reichle. Therefore, the instant claims are entitled to the filing date of the CIP parent application only with respect to subject matter which was disclosed in the parent. Accordingly, Reichle qualifies as prior art for the subject matter of the instant claims which was not disclosed in Nagy I.

Prior to identification of the subgeneric set of catalyst structures which forms the basis of the prima facie case of obviousness, a comparison of the three disclosures regarding the essential catalyst substituents is in order.

Core unbridged pyridinoxy or quinolinoxy ligand:

Nagy I discloses these at col. 2-3, when bridging unit Y is O (oxygen).

Reichle discloses these as structures (I) and (II) when $n=0$ (col. 1-2).

Nagy II claims these in independent claims 82, 93 and 104.

Transition metal M:

Nagy I discloses zirconium, titanium and hafnium (col. 2, line 36-37).

Reichle discloses group IIIB - VIII transition metals and lanthanides (col. 2, lines 24-25). Reichle has used outdated periodic group designations, and groups IIIB – VIII correspond to groups 3-10 as described in Nagy II.

Nagy II claims groups 3-10 in independent claims 82, 93 and 104.

Ligand group X:

Nagy I discloses halogen, C_1-C_6 alkyl, C_1-C_6 alkoxy and $-NR_2$, wherein R is C_1-C_6 alkyl (col. 2, lines 37-44).

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Reichle discloses hydrogen, aryl, alkyl, alkenyl, alkylaryl, arylalkyl, C₁-C₂₀ hydrocarboxy, -NR₂, -OR, -RCO (wherein R is C₁-C₂₀ hydrocarbyl) and halogen (col. 3, lines 24-29).

Nagy II claims halogen, C₁-C₆ alkyl, C₆-C₁₄ aryl, C₇-C₂₀ alkaryl, C₇-C₂₀ aralkyl, C₁-C₆ alkoxy, and NR₂ in independent claims 82, 93 and 104.

Substituent groups R' (Nagy) and R¹⁻⁴ (Reichle):

Nagy I discloses hydrogen, C₁-C₆ alkyl, C₆-C₁₆ aryl, C₁-C₆ alkoxy, halogen, or CF₃ (col. 2, lines 34-36).

Reichle discloses hydrogen and C₁-C₂₀ hydrocarbon (col. 3, lines 31-34).

Nagy II claims hydrogen, C₁-C₆ alkyl, C₆-C₁₄ aryl, C₁-C₆ alkoxy, halogen, C₇-C₂₀ aralkyl, C₇-C₂₀ alkaryl or CF₃ in independent claims 82, 93 and 104.

As seen from the comparison above, the scope of catalyst substructures disclosed in Reichle and claimed in Nagy II are substantially coextensive, with the disclosure of Nagy I being significantly narrower.

→ To obtain the catalysts structures set forth in claims 82-104 which have been disclosed in Reichle but not disclosed in Nagy I, it would be necessary to select from Reichle either pyridinoxy or quinolinoxy ligands wherein n=0 (i.e., no bridge), and at least one of the following: (a) M comprising any group 3 or group 5-10 transition metal, or (b) X comprising any C₆-C₁₄ aryl, C₇-C₂₀ alkaryl or C₇-C₂₀ aralkyl. One of ordinary skill in the art would be motivated to select an unbridged pyridinoxy or quinolinoxy ligand with at least one of subcomponents (a) or (b) because these species comprise a substantial fraction of the total number of species suggested by Reichle. Reichle has

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stated that useful catalyst structures would result, and therefore reasonable success would be expected when using the various embodiments.

5. Applicant's arguments filed 6/30/2003 have been fully considered but they are not persuasive.

Regarding the new matter rejection, applicants rely on prior argument. The prior argument fails to identify where support exists in the specification as filed for the negative limitation, and therefore fails to preclude the rejection of new claim 104. Applicants' prior argument implies that the mere citation of a reference during patent prosecution allows applicants to add disclosure from the reference into their claims as new negative limitations. In fact, the content of the specification is closed on the filing date, and no new concepts, in the form of either positive or negative limitations, may be added after the filing date.

In an effort to preclude a rejection over new claims 82-104, applicants have referred to arguments presented in the prior appeal. However, these issues have all been addressed in the Examiner's Answer (although not addressed by the Board in the Decision mailed 1/27/2003), and therefore the content of the Answer is relied upon herein.

Applicants have presented new argument asserting priority to groups corresponding to Reichle X groups in an apparent attempt to remove X as C₆-C₁₄ aryl from the scope of substituents which are prior art. However, this argument is ineffective because the disclosure of Reichle is directed only toward complexes with two pyridinoxy

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or quinolinoxy ligands. In Nagy I, if the structure has two pyridinoxy or quinolinoxy ligands, then no additional L groups are permitted, and the disclosed group of remaining ligands (i.e., X groups) are not disclosed to be aryl. Furthermore, applicants' argument has failed to mention any of the other species (including the selection of M from transition metal groups 3 or 5-10) of catalysts which are disclosed in Reichle but not disclosed in Nagy I. Accordingly, the argument fails to preclude a new rejection over Reichle.

Allowable Subject Matter

6. Claims 22, 24-28, 30-34, 38-42, 44, 46-48, 50, 51, 53, 55, 58-61, 63, 65-67 and 69-72 are allowed. Claims 74-81 are not rejected over Reichle because these claims are limited to species comprising M, X and R' components which are disclosed in Nagy I, and therefore Reichle is not prior art against these claims.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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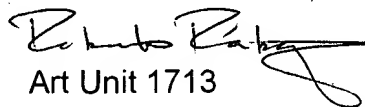
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rob Rábago whose telephone number is (703) 308-4347. The examiner can normally be reached on Monday - Friday from 7:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (703) 308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

ROBERTO RABAGO
PATENT EXAMINER


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October 10, 2003